

**Maine College Transitions Project**  
College Transitions Syllabus  
August 2005

**Title: Number Skills for College**

Draft # 2

The intent of this syllabus is to provide Adult Education program administrators and instructors a suggested core and title for the provision of a transition math class.

It is expected that this class will match the needs of adult learners to prepare for and develop skills for placement testing and success in college level math courses, and to avoid the repetition of a basic developmental course at the post secondary level.

**Suggested contact hours: 45 - 60****Course Description:**

The Transition Curriculum is designed for high school graduates or GED recipients who intend to or are applying to post secondary institutions.

This course covers the basic arithmetic of whole numbers, exponents and roots, the order of operations, fractions, decimals, percents, ratio and proportion, measurement and units, integers, geometry, simple statistics and includes applications that use those topics. Students will learn to work with and without the use of a calculator.

Because of the need for future academic applications, students should learn to use appropriate mathematical vocabulary and notation.

- Use whole numbers in the four basic arithmetic operations (+, -, x, /)
- Use simple exponents and the order of operations
- Use fractions in the four basic operations
- Use decimals in the four basic operations and round
- Calculate square roots of perfect squares and estimate square roots of decimals
- Find ratios and solve proportions
- Calculate percents and solve the three kinds of percent problems
- Perform simple financial calculations, such as unit cost, discounts, taxes
- Calculate simple interest and percents of increase/decrease and profit/loss
- Make and understand graphs and tables of data
- Calculate the mean, median and mode of sets of data
- Make measurements using the metric and U.S. systems and perform unit conversions within and between the systems
- Perform the four basic operations with integers and rational numbers
- Perform geometric calculations using angles, perimeter, area and volume

All skills listed should be presented and applied in real life situations and word problems when possible.

**Suggested Text and Materials:**

Math Problem Solver, 2<sup>nd</sup> Edition, Mary Manly, Contemporary Books (Item # 007 294 3009)

Basic College Mathematics, K Elayn Martin-Gay. Prentice Hall, New Jersey.  
(ISBN # 0-13-067699-3)

Figure It Out, Book 2 and Book 3, Mary Wallace. Original pub. Cambridge Adult Education, Prentice Hall, 1981, out of print. (Title owned by Pearson, application for rights being searched 2005 by Transition Project - ISBN # 0-8428-2286-0)

EMPower Mathematics, Key Curriculum Press, new materials, visit [empower.terc.edu](http://empower.terc.edu).

*[Future reviews of this syllabus will include additional and optional texts based on input from field practitioners.]*

**Recommended Curriculum:**

The York County Adult Education Math Curriculum Framework is available; completion of Tier I is recommended.

**Placement Testing:**

Based on current admissions procedures at the Maine Community College System, various cut scores are required at individual campuses. Placement into a Number Skills for College course or program of study is recommended for students scoring less than 60 on the arithmetic section of the Accuplacer examination or scoring less than 490 in math in a recent (within one year) GED test. These scores closely align with a 10.0 GE or 580 Scale Score on the TABE A.

Because of the need to prepare for and score well on placement examinations, test taking skills should be incorporated into instruction.

**Sources:**

Accuplacer Guide  
SMCC Math Syllabus, MAT 020  
USM Math Content, MAT 009  
Standards for Success, Association of American Universities

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